

ECAT Physics Chapter 2 Vectors and Equilibrium

Sr	Questions	Answers Choice
1	Two forces of 10N and 8N are applied simultaneously to a body. The maximum value of their resultant is:	A. 20 N B. -2 N C. 18 N D. 36 N
2	The direction of vector in space is specified by:	A. One angle B. Two angles C. Three angles D. None of above
3	Cosine of an angle is positive in:	A. 2nd quadrant B. 3rd quadrant C. 4th quadrant D. All of these
4	The change of order of vectors in a dot product of two vectors:	A. Changes its value B. Doesn't change its value C. Changes the direction product quantity D. None of these
5	Two forces each of the magnitude F act perpendicular to each other. The angle made by the resultant force with the horizontal will be:	A. 30° B. 45° C. 60° D. 90°
6	The direction of vector in space is specified by:	A. One angle B. Two angles C. Three angles D. None of these
7	A vector which has magnitude 'one' is called:	A. Resultant vector B. A unit vector C. Position vector D. None of these

8	When the magnitude of two component vectors are equal to that of their resultant, then the angle between the components is:	<p>initial;";>" B. 90" C. 120" D. 150"</p>
9	The rectangular components of a vector are equal in magnitude when the vector makes and angle _____ with their x-component:	<p>A. 0" B. 30" C. 45" D. 60"</p>
10	The sum of two or more vectors is equal to a single vector which is called:	<p>A. Component vector B. Resultant vector C. Product vector D. None of these</p>
11	The vector is space has:	<p>A. One Component B. Two Compnents C. Three Components D. Non of these</p>
12	A person starts his journey from a point O, travels 4 Km SW, then 4 Km NW, and finally 4 Km north-east. At what distance is he now from point O?	<p>A. 0 Km B. 4 Km C. 8 Km D. 12 Km</p>
13	When a vector is multiplied by a negative number, its direction:	<p>A. Remains the same B. Changes C. Changes by 180" D. Changes by 90"</p>

background-repeat: initial;
background-attachment: initial;
background-origin: initial;
background-clip: initial;">°
D. None of these

14 Which of the following is scalar quantity?

- A. Electric potential
- B. Velocity
- C. Momentum
- D. Force

15 A vector of magnitude 5 N is added to a vector of magnitude 8 N while the orientations are changeable. Range of their possible sum will be very from:

- A. Zero to 3 N
- B. 1 N to 13 N
- C. 13 N to 3 N
- D. None of these

16 Choose the set of physical quantities, which have both numerical and directional properties:

- A. Velocity, mass
- B. Speed, acceleration
- C. acceleration weight
- D. Distance, force

17 If a vector lies in second quadrant, then B_x and B_y are:

- A. -, +
- B. +, -
- C. +, +
- D. -, -

18 The perpendicular distance from the axis of rotation to the line of action of force is called:

- A. Moment arm
- B. Moment of a force
- C. Torque
- D. Non of these

19 The magnitude of the resultant of two forces may be increased by:

- A. Increasing the angle between them
- B. Decreasing the angle between them
- C. Drawing a triangle to represent them
- D. None of these

20 If the vector 5 N lies along with x-axis, then its component along y-axis will be:

- A. Zero
- B. 5 N
- C. 7 N
- D. 10 N